

ANNEX III

REPORTS FROM DATA MANAGEMENT CENTRES

The following pages contain the reports by the:

- Responsible National Oceanographic Data Centre (RNODC) for drifting buoys of the International Oceanographic Data and Information Exchange (IODE) system of IOC, which is implemented by the Canadian Marine Environmental Data System (MEDS); *p. 2*

- Specialized Oceanographic Centre (SOC) for drifting buoys of the Joint IOC-WMO Technical Commission for Oceanography and Marine Meteorology (JCOMM), which is implemented by the Subdivision Prévision marine (SCEMO/PREVI/MAR) de Météo-France. *p. 14*

Report of the RNODC for drifting buoys
(September 2000 to August 2001)

As part of its mandate as the Responsible National Oceanographic Data Centre (RNODC) for drifting buoys, MEDS continues to capture, conduct partial quality control, archive and make available all GTS data reporting in BUOY code.

1. Data archiving

During the last interseasonal period, MEDS has archived an average of 232, 000 BUOY reports per month (Figure1) and received reports from an average of 860 buoys per month (Figure 2), an increase of 38,000 reports and 11 buoys from last year respectively. Figure 3 shows the number of meteorological/oceanographic observations posted on the GTS in relation to the total number of BUOY reports and Figure 4 shows GTS data coverage.

2. Data redistribution

MEDS continues to distribute buoy data upon request and on a regular basis. Last year, 35 drifting buoy data requests were satisfied and data was provided on a regular basis to 4 organizations. Requests came mostly from universities, government organizations and private consulting companies.

In addition to providing data through custom requests, MEDS continues to post Global Drifter Center datasets, which are processed, interpolated and sent to MEDS by AOML every year. These data are easily accessible and downloadable from MEDS web site at the following address: http://www.meds-sdmm.dfo-mpo.gc.ca/meds/Prog_Int/WOCE/WOCE_SVP/SVP_e.html.

3. Quality control

a) Location

MEDS' policy regarding flagging of location data in BUOY reports was discussed at the last International Arctic Buoy Programme meeting, Yokohama, May 30 - 1 June 2001. MEDS flags as suspicious all BUOY reports where the difference between location time and observation time is greater than 30 minutes. This practice results in approximately 55% of all BUOY reports being flagged as suspicious. As a direct consequence, more than half of the data does not get included on maps and inventories produced on a monthly basis and posted on MEDS' web site. In some cases, this data does not get distributed to people who request it.

IABP expressed concern about this issue because it would expect users to see all active buoys appear on MEDS maps and inventories. The IABP and the Technical Coordinator's position on the issue was that most of BUOY reports with difference between observation time and location time exceeding 30 minutes are reliable and include valuable data for numerical weather prediction and synoptic meteorology. Consequently, the IABP asked the technical coordinator to discuss the issue in a global perspective and depending on feedback, to write a letter to MEDS asking to consider changing their flagging policy and reprocess their archive.

b) Meteorological observations

Quality control of air temperature and pressure, wind speed and direction consists of an automated range check and a visual check to look for unwanted spikes. The ranges used are as follows:

Observation	Minimum	Maximum
Air temperature	-40°C	50°C
Air pressure	905 hPa	1060 hPa
Wind speed	0 m/s	200 m/s
Wind direction	0°	360°

c) Sea surface temperature and profiles

Sea temperature is quality controlled by performing an automated range check (-2°C to 40°C) and a visual check to look for unwanted spikes. If a temperature profile is present, quality control is performed by comparing the profile to the Sid Levitus climatology.

4. Products

MEDS has partly redesigned the RNODC web site and continues to post monthly maps, inventories and statistics. These products are generated globally and by action group. This year's addition includes individual maps of currently active buoys since the time they were deployed to the present for each of the action groups. The RNODC's URL is:

http://www.meds-sdmm.dfo-mpo.gc.ca/meds/Prog_Int/RNODC/RNODC_e.html

MEDS also published a CD-ROM entitled "*International Arctic Buoy Programme and Arctic Buoy Data 1979 to 1999 – Version 1.0*", which is a compilation of 20 years of IABP research data (1979-1999). The CD was distributed to IABP and IPAB participants mainly. Anyone who wishes to acquire the CD can do so by requesting a free copy from MEDS' Request Services (services@meds-sdmm.dfo-mpo.gc.ca).

Finally, MEDS produced an animation entitled "*Sea Surface Temperature Anomalies & Drifting Buoys Tracks in the Equatorial Pacific*", which shows 20 years of SST anomalies overlaid with drifting buoy trajectories. The animation clearly shows El Niño events. The Reynolds SST dataset was downloaded from the Climate Diagnostics Center and drifting buoy data was obtained directly from MEDS' archive. The animation can be requested from Request Services or downloaded from MEDS' anonymous FTP site ftp.meds-sdmm.dfo-mpo.gc.ca/pub/drifting_buoys.avi.

5. Goals for 2001-2002

- Re-evaluate MEDS' QC system for drifting buoys.
- Change flagging policy of location data and implement these changes by modifying the QC software and reprocessing the archive.
- Investigate the possibility to actively participate in the DBCP QC guidelines for location data.
- Improve products and accessibility to data on MEDS web site

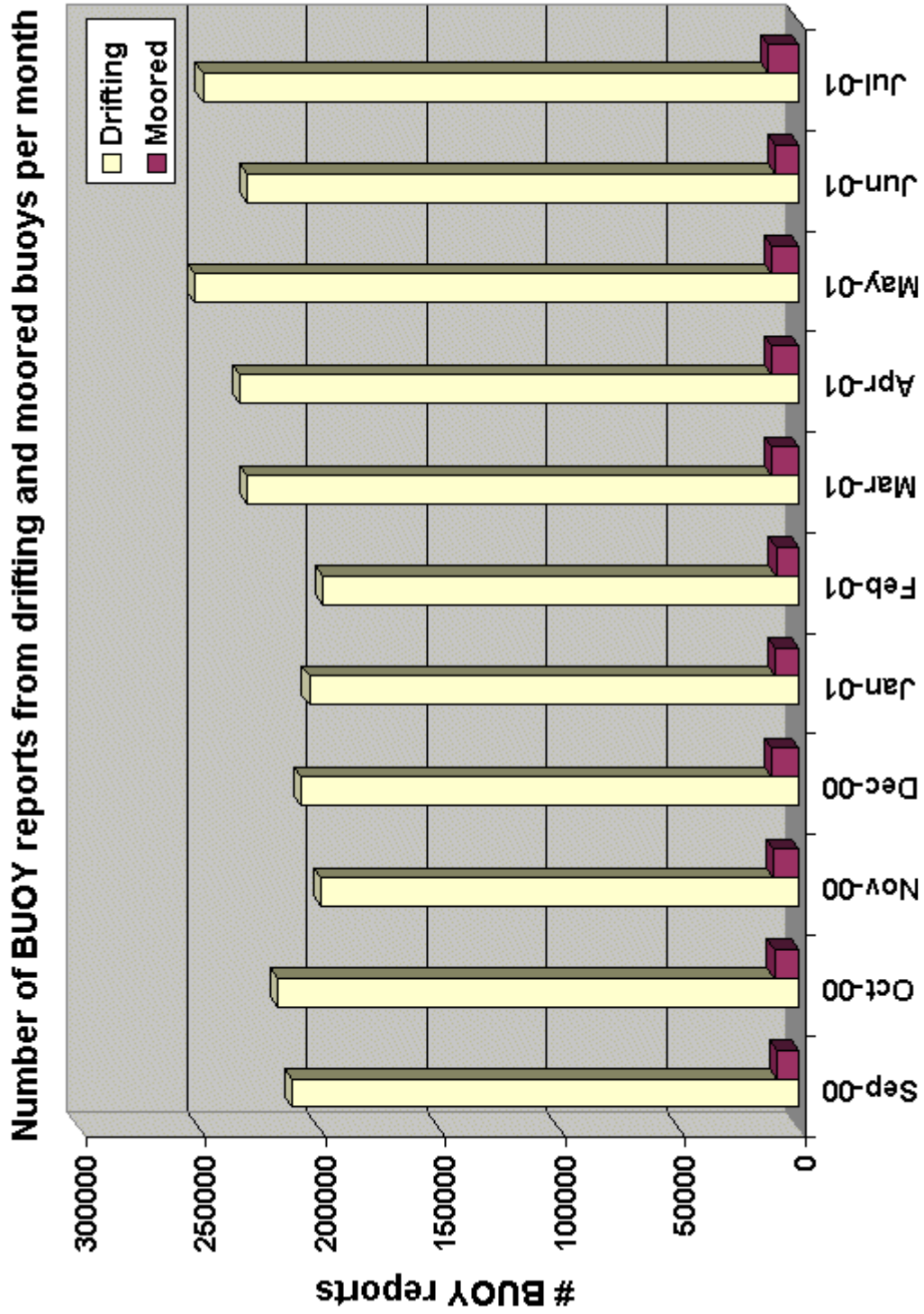


Figure 1

Number of drifting and moored buoys reporting in BUOY code archived at MEDS

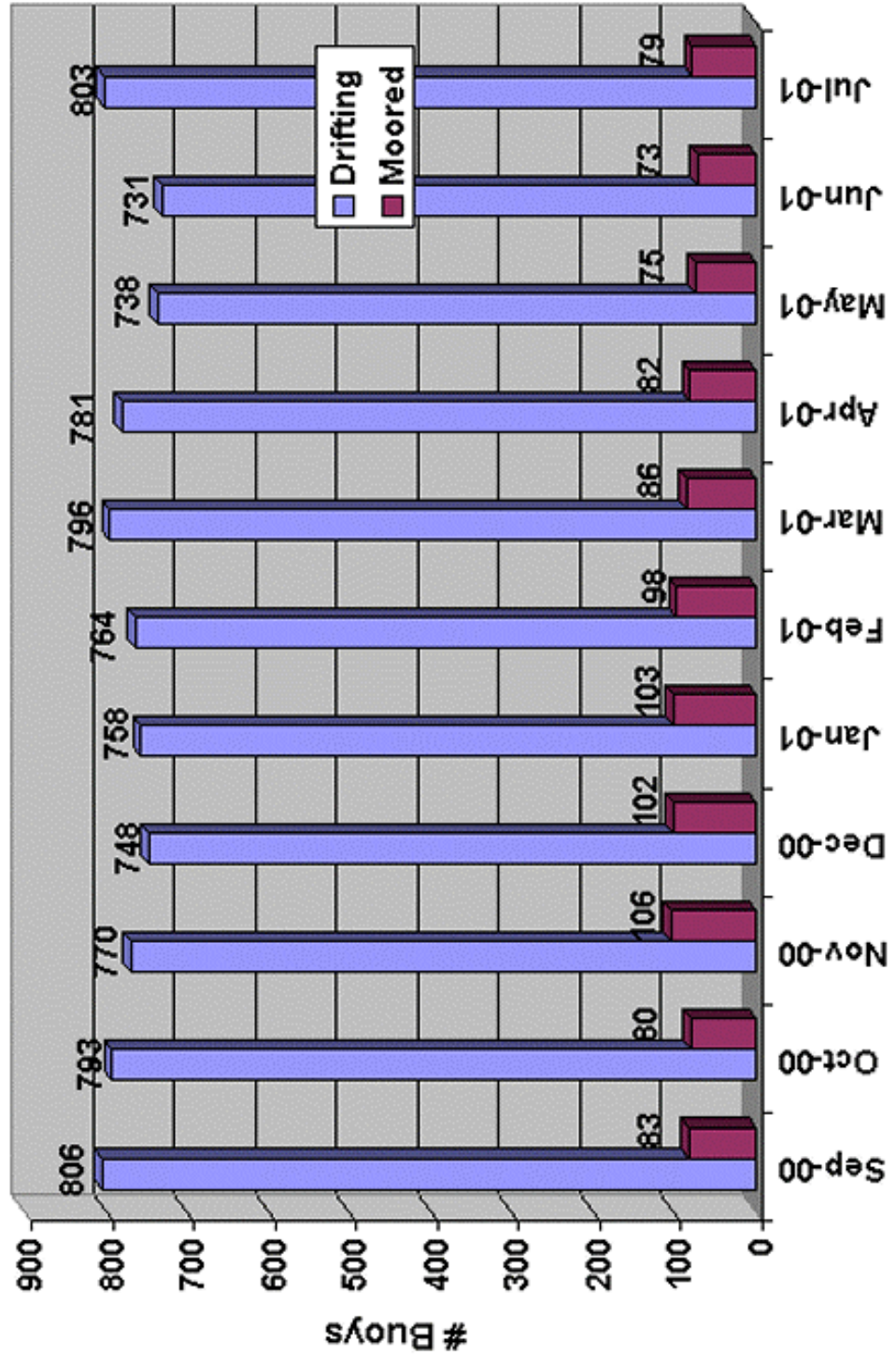


Figure 2

Number of BUOY reports with SST and met observations

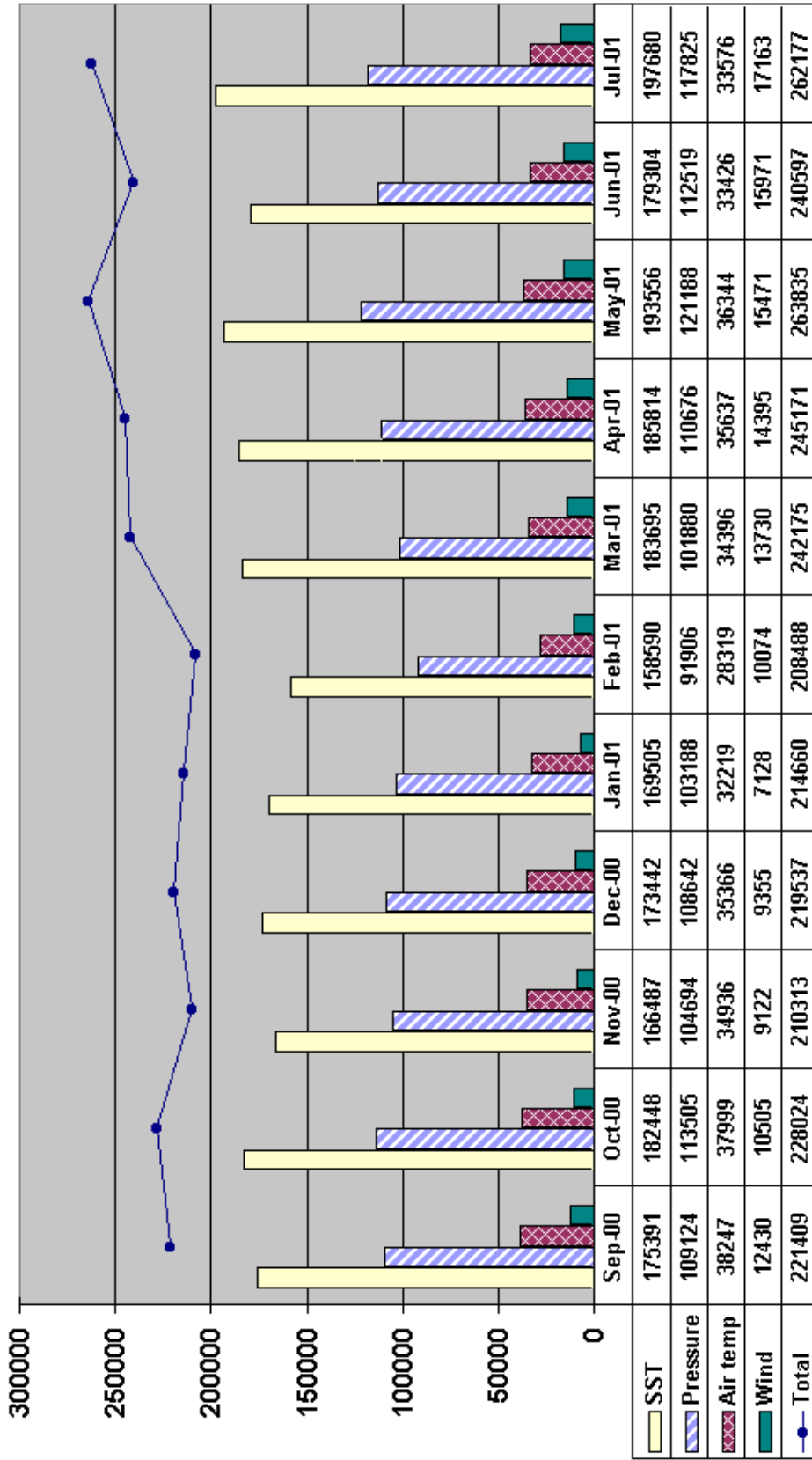


Figure 3

**Spatial coverage of GTS data
(Sep 2000 to Jul 2001)**

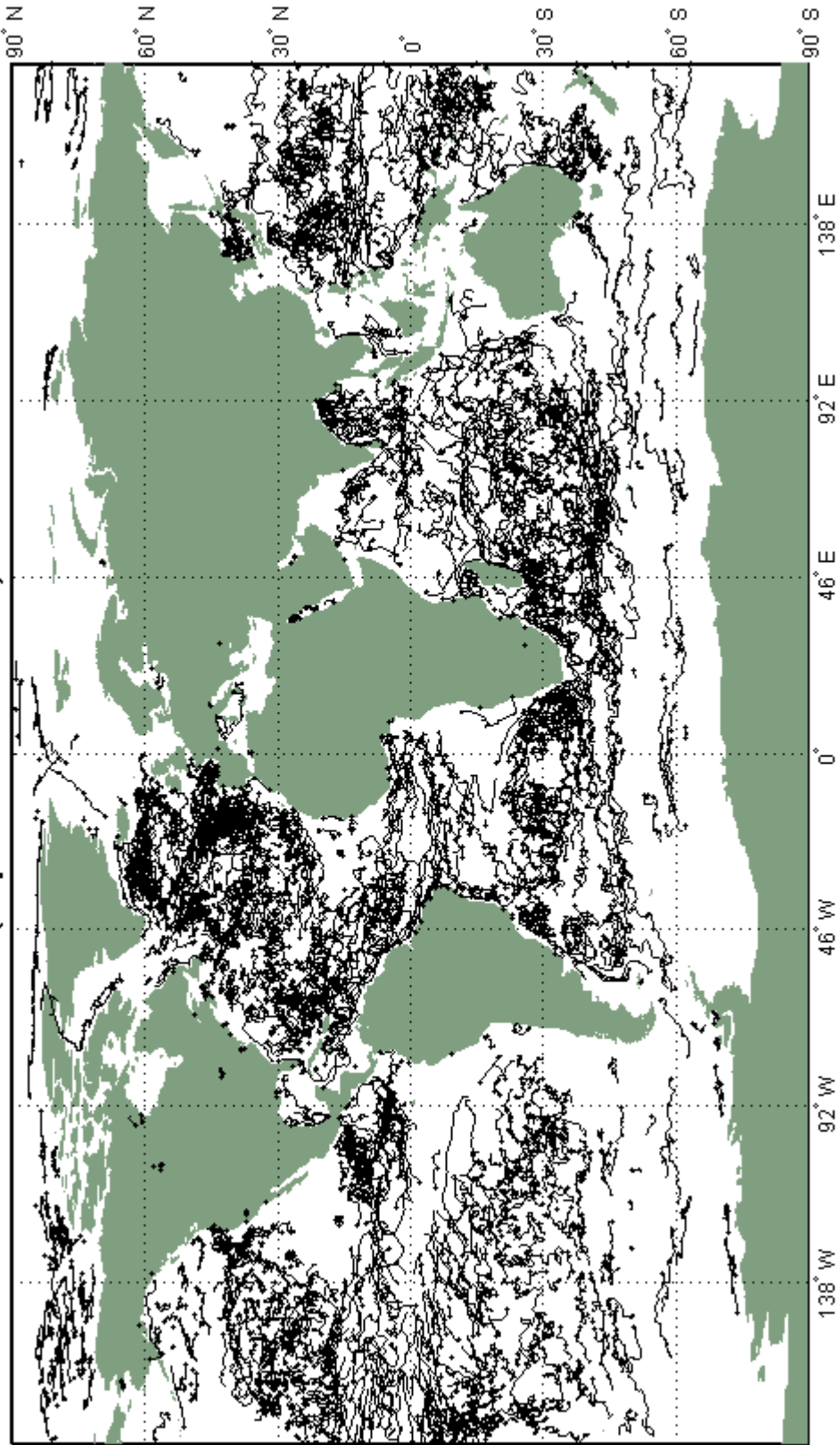


Figure 4



SOC for Drifting Buoy Report

2000 - 2001

In 2000 and 2001, Météo-France and Ifremer have initiated the data management part of the Coriolis project. Coriolis is a collaborative effort focused on *in situ* oceanic observation. The French SOC activity should be in the near future part of this project. Besides, Météo-France SOC has increased the collaboration with JCOMMOPS, taking advantage of methods and tools used for buoys.

A daily collection and archiving of buoy reports from the world ocean is performed by Météo-France, the French Meteorological service. As usual the French SOC for Drifting Buoy produces monthly graphic products for buoys, moored buoys, drifting buoys, ships. Data are delivered on request, or on a regular basis.

- Figures 1, 2, 3, 4, show the time evolution of reports for wind and for pressure respectively for all BUOY reports (showing all buoys, moored buoys and drifting buoys) and SHIP reports, since the 1st of January 2000.
- Figure 5 shows the time evolution of WAVEOB reports and sensors since the 1st of January 2000. Notice the drastic reduction of such messages in Feb. 2001.

Each month, mapping position plot charts and Marsden square distribution are produced for BATHY, TESAC, SHIP and BUOY and are sent to 70 users in the world.

- Figures 6a,b to 9a,b show these products for July 2001. "a" stands for mapping position plot charts, and "b" for Marsden square distribution. Figure 6: BATHY, 7: TESAC, 8: SHIP, and 9: BUOY.

Each month, Marsden square distribution charts of mean monthly data availability (top) and percentage of BUOY reports compared to SHIP + BUOY reports (bottom) for wind, pressure, air temperature, sea surface temperature are produced.

- Figures 10 to 13 show such products for July 2001. Figure 10: Wind, 11: Pressure, 12: Air temperature, 13: Sea surface temperature.

Rapport DBCP 2000-2001

Time evolution of BUOY reports for wind and pressure

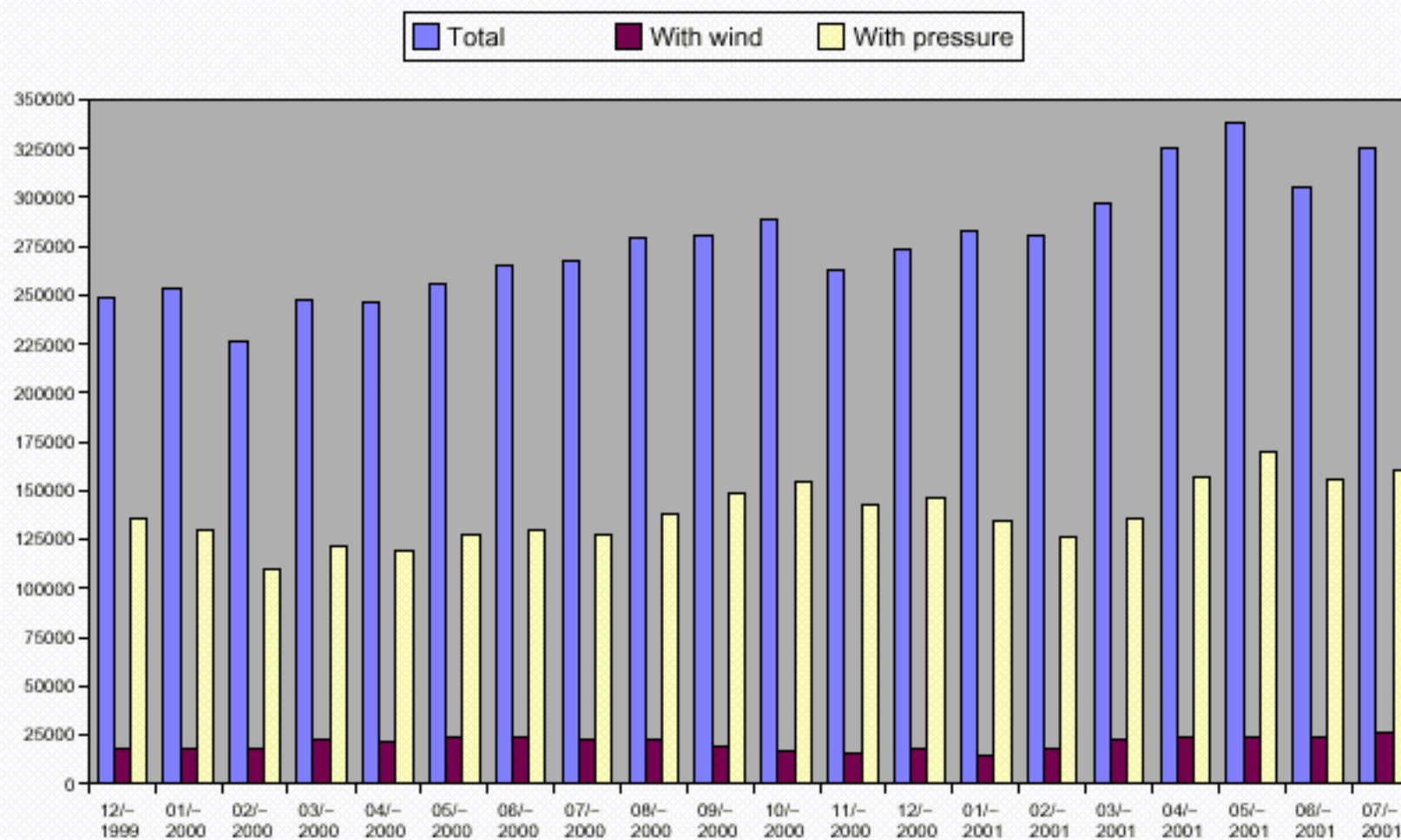


Figure 1

Rapport DBCP 2000-2001

Time evolution of Moored BUOY reports for wind and pressure

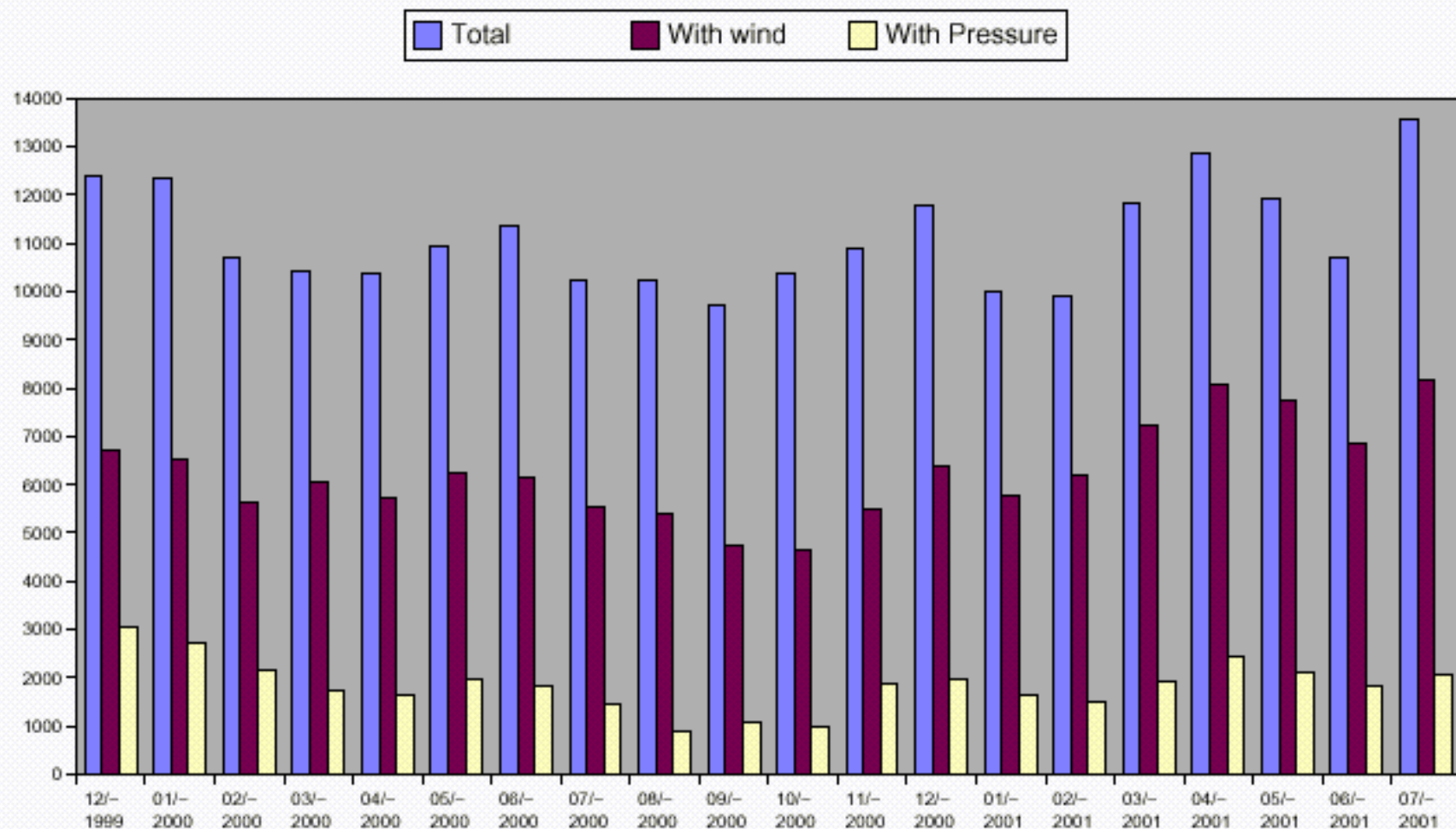


Figure 2

Rapport DBCP 2000-2001

Time evolution of Drifting BUOY reports for wind and pressure

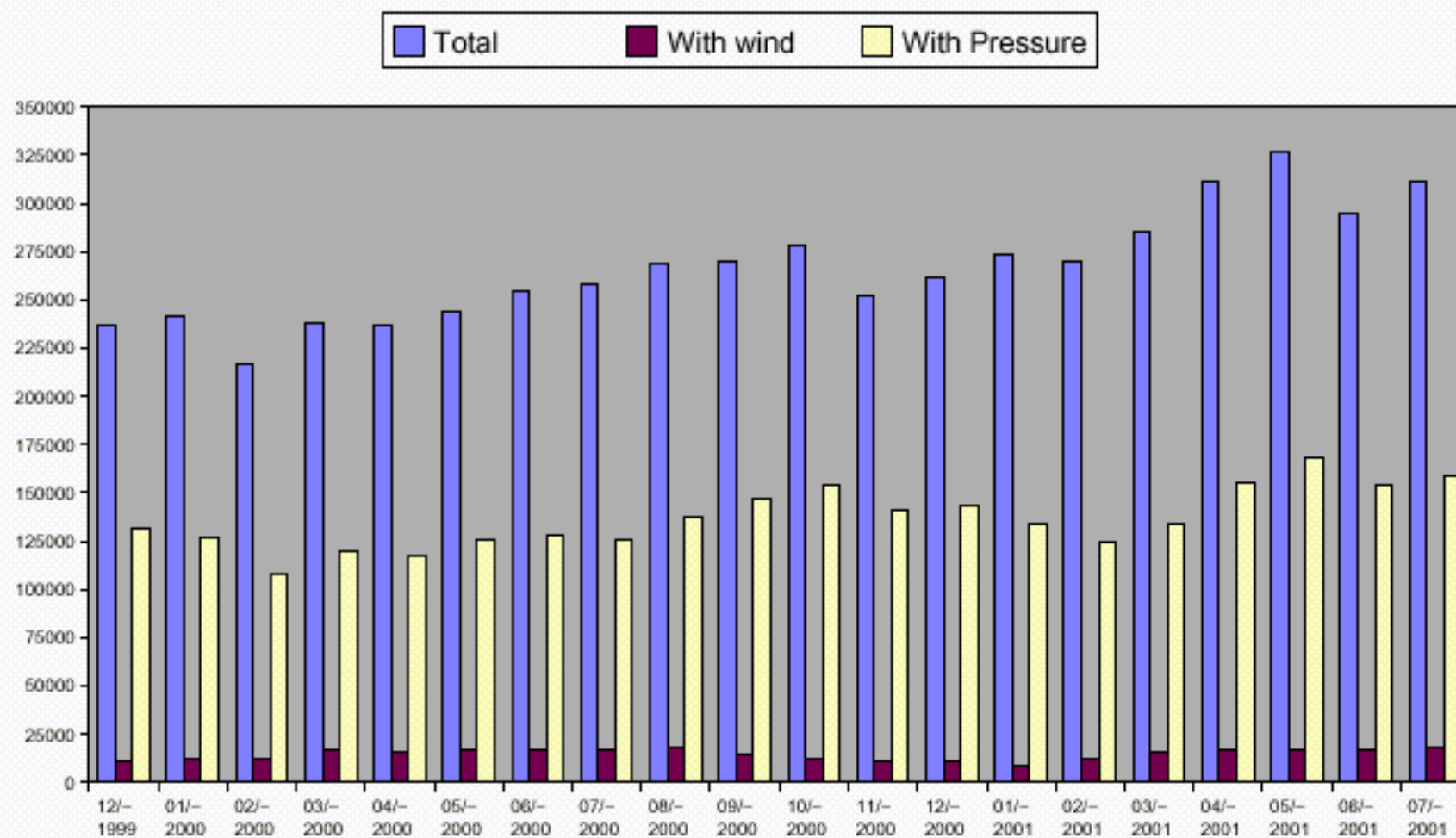


Figure 3

Rapport DBCP 2000-2001

Time evolution of SHIP reports for wind and pressure

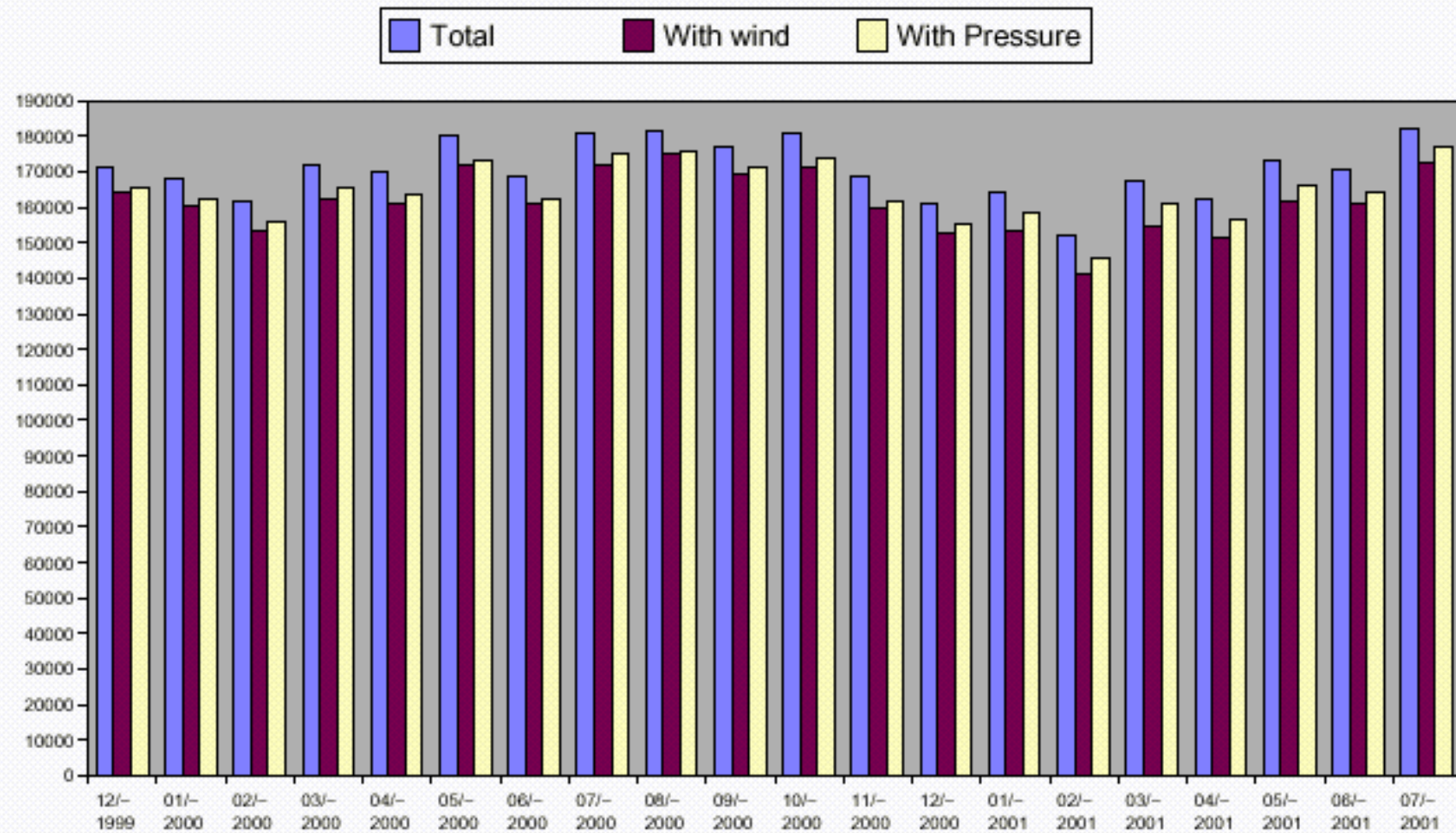


Figure 4

Rapport DBCP 2000-2001

Time evolution of WAVEOB reports and sensors

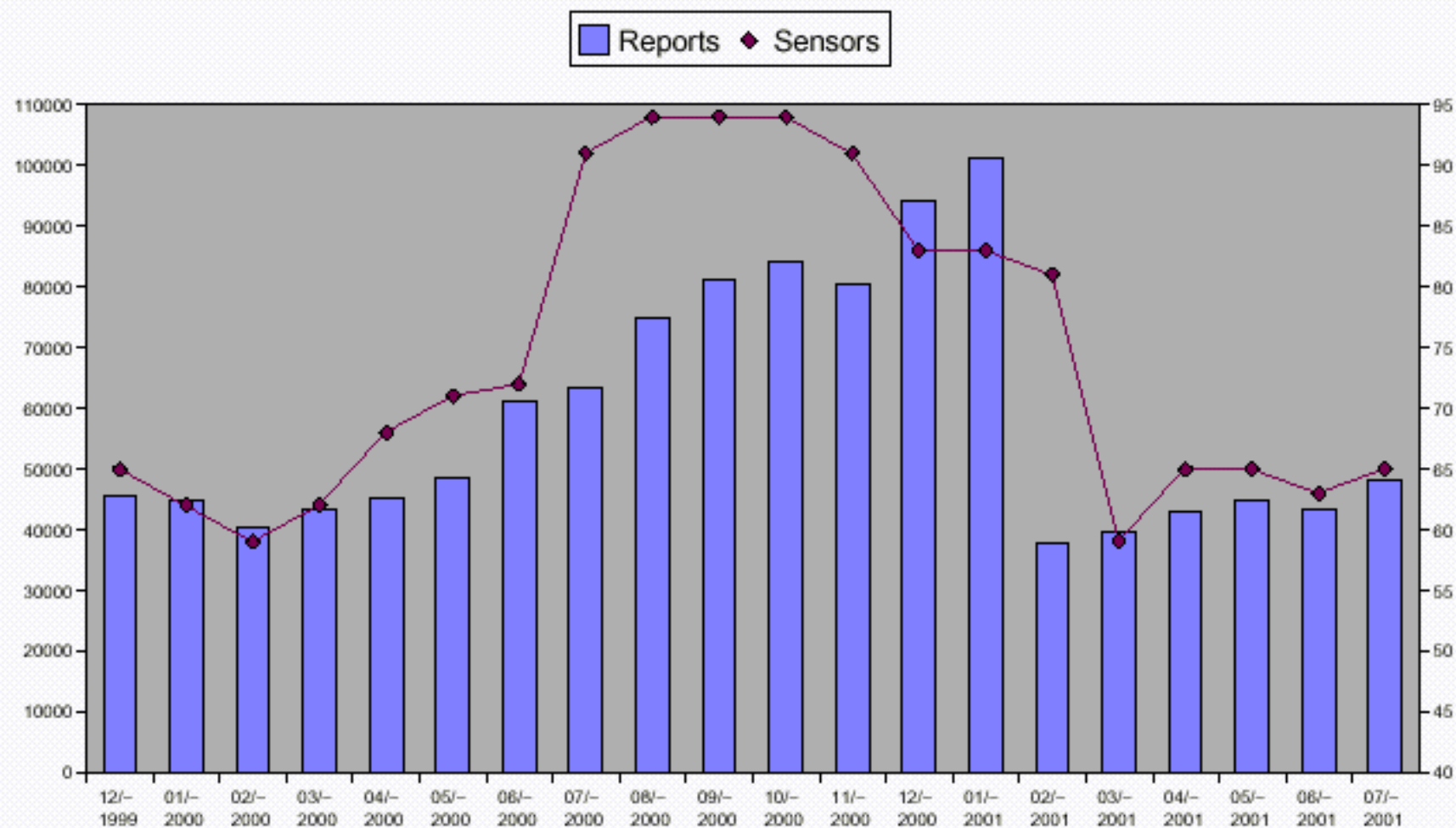


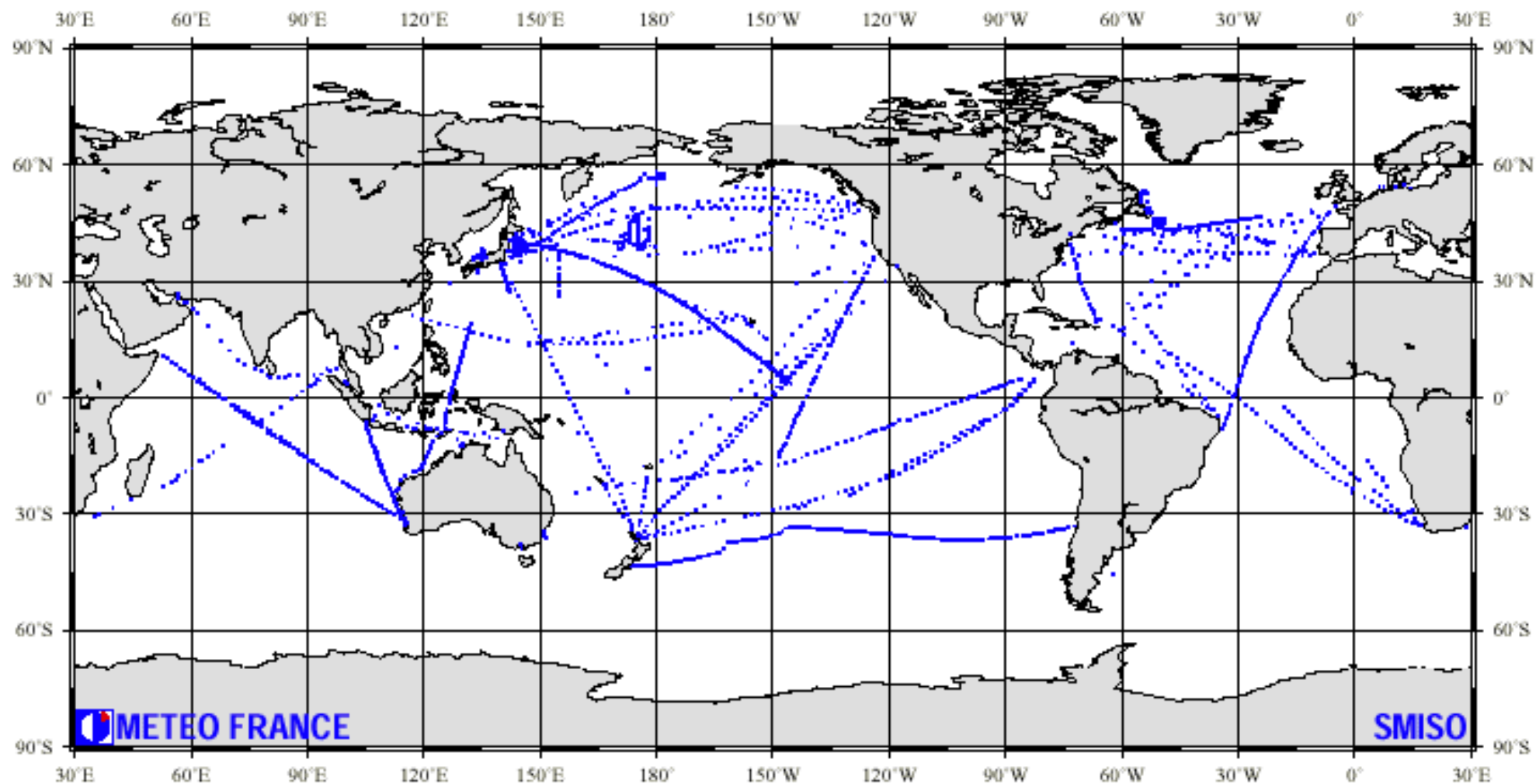
Figure 5

Carte de pointage des observations reçues en juillet 2001

Mapping position plot chart of data received during July 2001

Messages : BATHY

Total : 2562

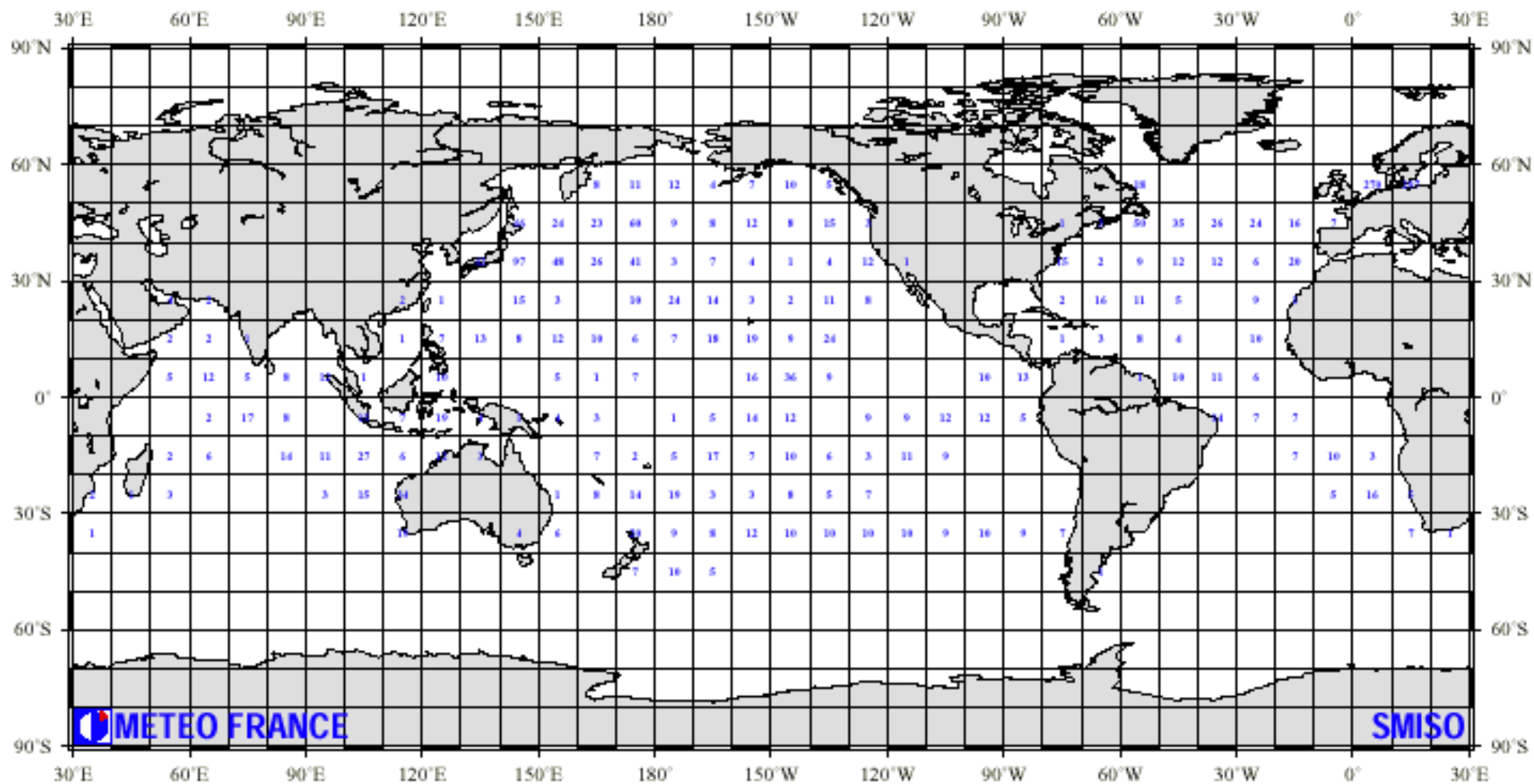


Répartition par carré Marsden des observations reçues en juillet 2001

Marsden square distribution chart of data received during July 2001

Messages : BATHY

Total : 2562

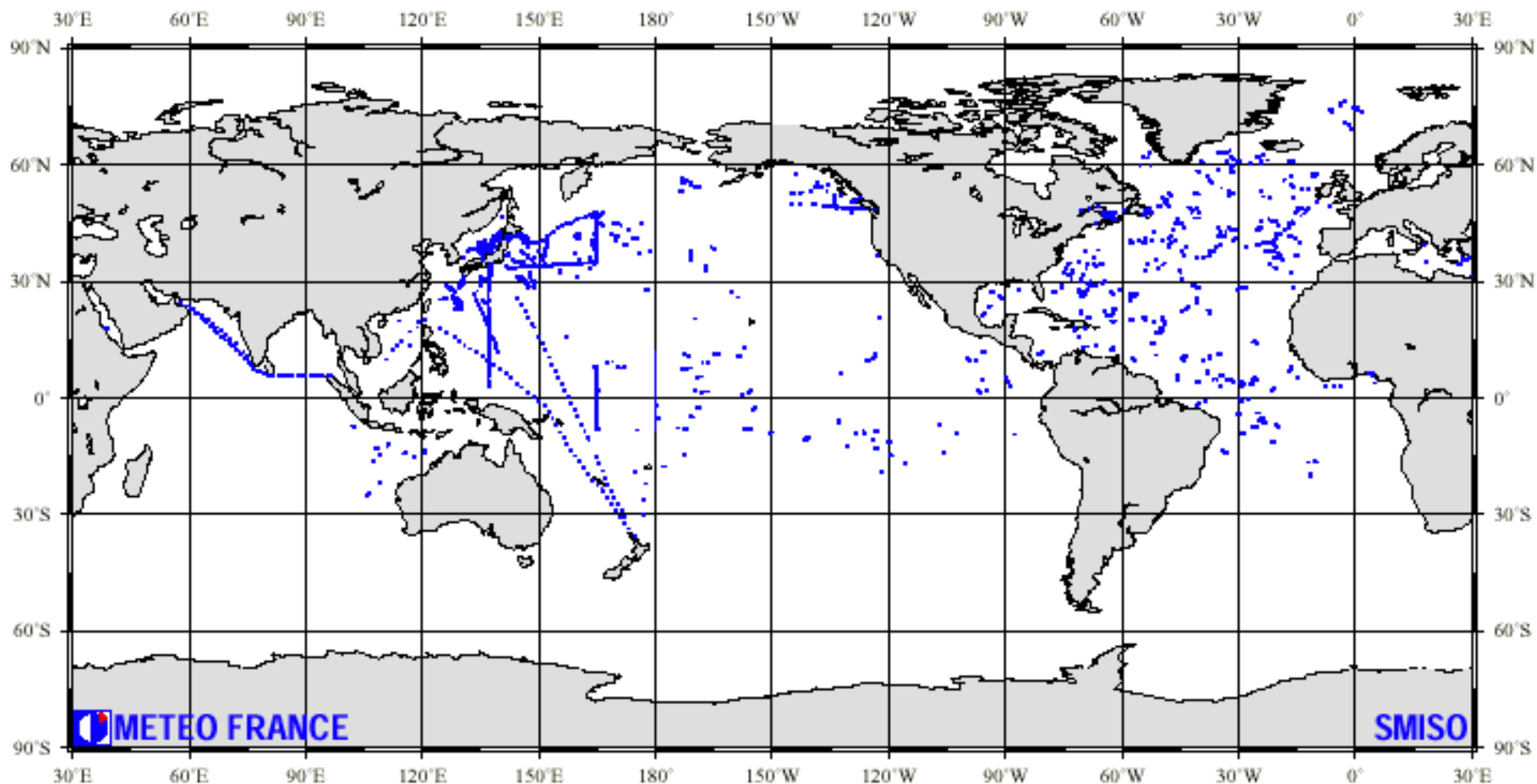


Carte de pointage des observations reçues en juillet 2001

Mapping position plot chart of data received during July 2001

Messages : TESAC

Total : 1633

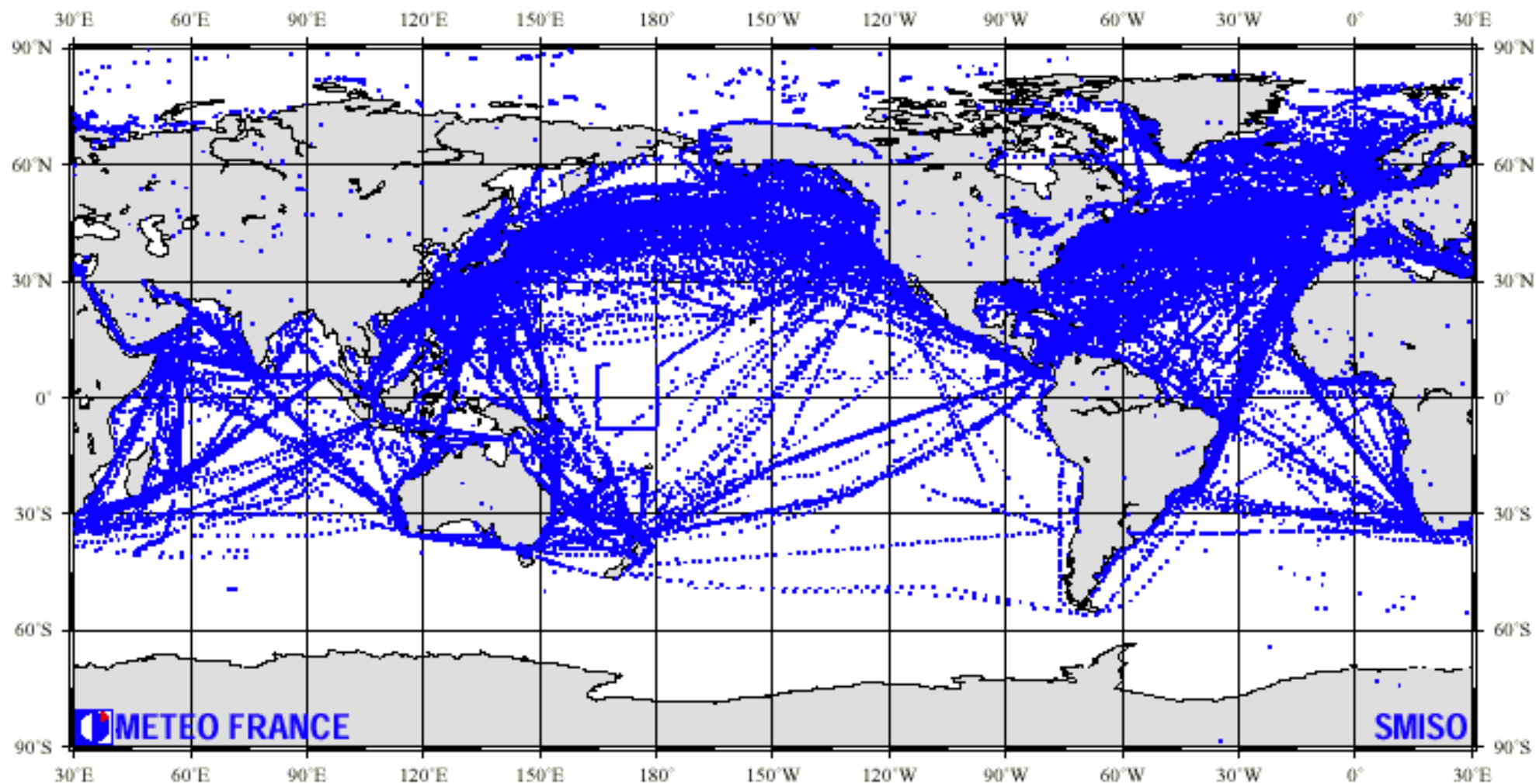


Carte de pointage des observations reçues en juillet 2001

Mapping position plot chart of data received during July 2001

Messages : SHIP

Total : 182424

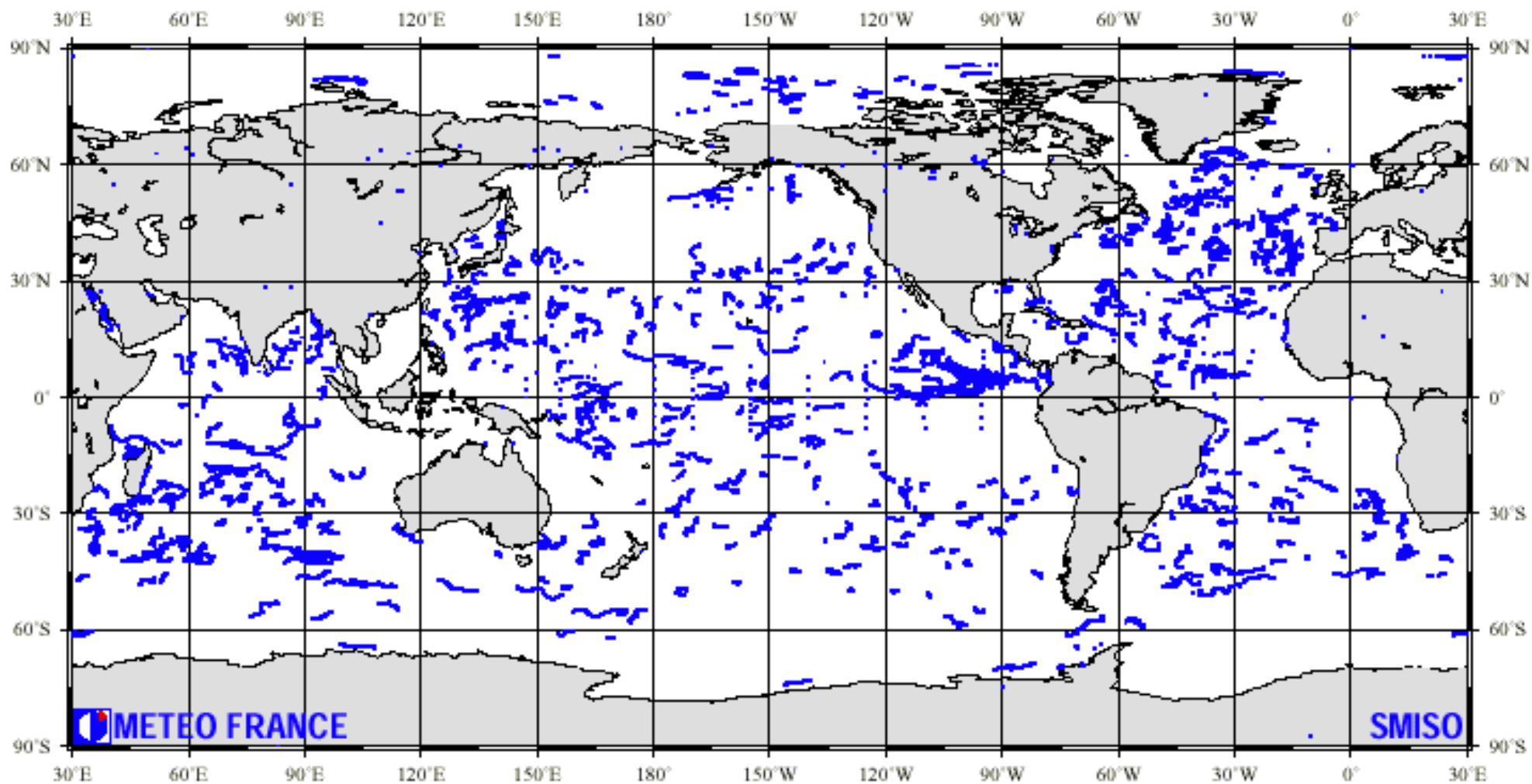


Carte de pointage des observations reçues en juillet 2001

Mapping position plot chart of data received during July 2001

Messages : BUOY

Total : 324844



METEO-FRANCE

WIND

JULY 2001

Marsden square distribution chart of mean monthly data availability index (top)
 (Index 100 = 8 obs. per day per 500km * 500km area of SHIP and BUOY reports)

and
 Percentage of BUOY reports compared to SHIP+BUOY reports (bottom)

